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| Notice of Allowability | Application No. | Applicant(s) |
| | 10/001,518 | JOHNSON, STEPHEN B. |
| | Examiner Fritz M Fleming | Art Unit 2182 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 11/15/2004.
2. The allowed claim(s) is/are 1 and 4-27.
3. The drawings filed on 30 October 2001 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of
 Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.


FRITZ FLEMING
PRIMARY EXAMINER
GROUP 2100

Allowable Subject Matter

1. Claims 1,4-27 are allowed.
2. The following is an examiner's statement of reasons for allowance: The examiner has reviewed the art of record, the amended claims, the originally filed disclosure, and performed an update search in determining the claim allowability. Each of the independent claims (i.e. 1,4,16 and 27) has been amended to include a limitation setting a limit to the input/output requests. In detail, claim 1 sets a limit to the number of input/output requests to be processed in a given time period, claim 4 sets an input output request limit and determines if this limit has been reached, claim 16 sets an input output request limit and determines if this limit has been reached, as does claim 27. The examiner has relied upon the Steeby and Ang and Mittal references to provide pertinent teachings in rejecting the claims. The examiner has relied upon the interpretation that Steeby's decrease in frequency would effectively limit the amount of requests processed in a given time period, which the examiner still sees as valid. However, while Steeby "limits" the number requests that can be processed in a given period of time, Steeby does not "set a limit". For example, per Figures 4A and B, the clock speed is decreased as the temperature is increased, thereby reducing the number of requests that can be processed. However, there is never an actual limit set, as the region of 84 could go on for an unknown time, thereby never setting an actual limit to the number of requests processed. While the number of requests will be limited compared to the 100% clock speed, Steeby never actually sets a limit of requests based upon a temperature threshold. The same reasoning applies to Ang, as requests are

limited by the switching to decreased throughput scenarios, but an actual limit is never set, as a decreased throughput scenario could go on for an unknown time, thereby never hitting a limit, as is clearly claimed. The same applies to Mittal, in which rates are throttled. Thus the patentable distinction is the actual setting of a "limit" which, per the disclosure, is clearly a number/value that is not to be exceeded, versus the art of record teaching a rate, which is not tied to an actual limit. This is what the applicants have argued, and the examiner agrees and has been persuaded. The amended material is supported by Figure 3, noting that a "storage controller" does not seem to be referred to per se (and not pointed out by applicants). However, the controller 110 is disclosed as being a server and a data transfer device, each of which have an understood function in the art to serve as storage controllers. Hence, no new matter is present.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. The terminal disclaimer filed on 9/30/2004 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on application 09/969,377 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz M Fleming whose telephone number is 571-272-4145. The examiner can normally be reached on M-F, 0600-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Fritz M. Fleming
Primary Examiner
Art Unit 2182

fmf